

SOFTWARE RELEASE NOTICE

SYSTEM: Automated Tracking Station (ATS)

RELEASE: 3.2

DATE: June 1, 2000

MODIFICATION DESCRIPTION:

- (1) Automation of the Data Stripper Controller (DSC) node. These software changes were completed by Scientific-Atlanta personnel under request-for-support (RFS) 98-089 and revision H of the sub-contract agreement with CSC. Automation of the TSI data stripper device is an enhancement and required in order to accommodate ADEOS II project requirements. The changes will affect ATS operation at the Wallops (WGS) and University of Alaska (ASF) ground stations.
- (2) Post-pass summary file failure. ATS 3.2 removes a bug that caused ATS to remove a 3-day old support profile folder after LOS, but before the post-pass summary process (*PassResultsCompiler.exe*) is allowed to complete (RFS #00-015). This support profile contains an event description file, *OperationalEvent.scd*, which is required for the post-pass summary process to execute. Removal of this file caused an immediate exit of the process. This problem was unfortunately introduced with the release of ATS 3.1 in March, 2000 and resolves discrepancy reports (DRs) AGS 00-0158, AGS 00-0159, SGS 00-082, SGS 00-097, SGS 00-119, SGS 00-120, SGS 00-128, SGS 00-129. ATS 3.2 also resolves a second problem uncovered for removal of 30-day old Apogee2208 log files during ATS 3.2 automation tests at WFF.
- (3) Station Status Display from non-WGS sites. Problems reported by Landsat-7 and EO-1 projects when displaying non-WGS station status have been fixed (RFS #00-015).
- (4) Automation of the Apogee2208 TDF device. The Apogee2208 TDF will replace the WFF-built TDF unit at all ground stations. The WFF TDF unit has exhibited unreliable behavior during operations. This new TDF addresses DRs SGS 00-095, SGS 00-104, SGS 00-122, SGS 00-124, SGS 00-125, SGS 00-126. Development was tracked using RFS 99-037.

Discrepancy Reports (DRs) Resolved:

SGS DRs: 00-082, 00-097, 00-019, 00-120, 00-128 and 00-129.

AGS DRs: 00-0158 and 00-0159.

EPGN Configuration Control Requests (CCRs) Resolved:

Tom: Need CCR #s here that are associated with the four items listed above.

Software Request-for-Supports (RFSs) Resolved:

98-089, 99-037 and 00-015.

FILES AFFECTED:

ATS 3.2 source code is archived on a server located at Scientific-Atlanta, Inc. in Atlanta, Georgia. Source code configuration control is monitored by *Microsoft Visual Source Safe* and managed by ViaSat, Inc. personnel. The procedures for an ATS release are documented in *Automated Tracking Station (ATS): Source Code Configuration Control Procedures* created in June 2000 and available for distribution by contacting Edward Payne at NASA/WFF (757-824-1104).

All ATS projects were re-built using the Microsoft Visual C++ compiler installed with Microsoft Developer 5.0 and service pack 6a. These project builds include Master/Node device graphical user interface applications:

FrameSynchronizerGDP225D.exe	PCMSimulatorGDP233.exe	SynthesizerHP3325B.exe
ModulatorGDP783M.exe	MatrixOptraxSS3003S.exe	DemodulatorAydin329A.exe
FilterKrohnwhite3905B.exe	RecorderMetrumBVLDS.exe	RFSwitchEditor.exe
BitSynchronizerDecom7715.exe	TdfApogee2208.exe	MatrixMSC10693.exe
MatrixGDP911.exe	MatrixOptraxSS100B.exe	ProgTMPProcAvtec1001.exe
MatrixHPE1366A.exe	WFFTDF.exe	StartAnInterface.exe

Master/Node device operation dynamic link libraries include:

GRMResources.dll	OpTrackingStation.dll	OPTSApogee2208.dll
OpTsAvtec1001.dll	OpTsAydin329A.dll	OpTsDecom7715.dll
OpTsGDP225D.dll	OpTsGDP233.dll	OpTsGDP783M.dll
OpTsGDP911.dll	OpTsHP3325B.dll	OpTsHPE1366A.dll
OpTsKrohnwhite3905B.dll	OpTsMetrumBVLDS.dll	OpTsMSC10693.dll
OpTsNodeManager.dll	OpTsOptraxSS100B.dll	OpTsWff123.dll
OpTsWffTdf.dll		

Master/Node device control dynamic link libraries installed in the *Wff* folder include:

Av_PTP.dll	BitSync.dll	BSyncDecom7715.dll
DemodAydin329A.dll	Demodulator.dll	Filter.dll
FilterKrohnwhite3905B.dll	FrameSync.dll	FSyncGdp225d.dll
GRMPorts.dll	GRMRscController.dll	GRMRscManager.dll
MatGDP911.dll	MatHPE1366A.dll	MatMSC10693.dll
MatOptraxSS100B.dll	MatOptraxSS3003S.dll	ModGDP783M.dll
Modulator.dll	PCMSimGDP233.dll	PCMSimulator.dll
ProcessManager.dll	ProgTMPProc.dll	PTPAvtec1001.dll
RecMetrumBVLDS.dll	Recorder.dll	Synthesizer.dll
SynthHP3325A.dll	SynthHP3325B.dll	TDF.dll
TDFApogee2208.dll	Test.dll	TstWff123.dll
WCom.dll	WDev.dll	Wff.dll
WffTdf.dll	WGpp.dll	

Node-based applications installed in the *Wff* folder include:

Grm.exe	GRMMonitor.exe	MetrumBVLDSStatusDump.exe
TestOpTsNodeMgr.exe	Wff123.exe	

Master-based applications (* denotes new from previous ATS 3.1 release) include:

11mInterface.exe	* DSCInterface.exe	Grm.exe
ManualNotification.exe	MasterPassword.exe	MonitorAndControl.exe
PassResultsCompiler.exe	ProfileEditor.exe	RNInterface.exe
SAFSHeartbeat.exe	Scheduler.exe	ShippingReport.exe
StationAssetsEditor.exe	StationStatusDisplay.exe	WOTISInterface.exe

Master-based dynamic link libraries (* denotes new from previous ATS 3.1 release) include:

* SADSCDialog.dll	SARceiver.dll
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Other Master-based text files (* denotes new from previous ATS 3.1 release) required for ATS 3.2 include:

Master\Station\Initialization.txt	* Master\Profiles\Default\TdfApogee22080.fdt
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Other Node-based files (* denotes new from previous ATS 3.1 release) required for ATS 3.2 include:

Node\WcDevTDFApogee2208.status

Other system file changes required for data stripper controller and Apogee2208 TDF automation include:

\winnt\system32\drivers\etc\services	\winnt\system32\drivers\etc\hosts
Node\Regs\Grm(devices).reg	Node\Regs\Grm(operations).reg

VALIDATION PROCEDURES:

A test plan will be implemented at WGS in order to validate the four ATS 3.2 items and demonstrate no lost capability from the previous release. Following successful completion of WFF N-161 lab (non-operational) tests, a test plan will be submitted to WGS operations leader Jim Hendrickson. The test plan will provide a general agreement between expected ATS behavior and operations personnel. The following items will be tested:

- (1) Automation of the Data Stripper Controller (DSC) node. Testing will be conducted with ViaSat software engineer Raj Kumar. The following items will be demonstrated:
 - a. Master can execute the DSCInterface.exe and establish the socket communications with the DSC node.
 - b. Master can display the DSC status by selecting the associated icon on the block level diagram.
 - c. Master can automatically send a schedule file to the DSC node via FTP at support initialization.
 - d. Master can send a remote command to the DSC node in order to load the remote schedule.
 - e. Master can disconnect from the DSC node.
- (2) Post-pass summary file failure. None have been noted during ATS 3.2 beta testing at WGS in May 2000, but discrepancy reports will continue to be reviewed.
- (3) Station Status Display from non-WGS sites. Testing will be coordinated with Matt Wendlin in Landsat-7 Flight Operations.
- (4) Automation of the Apogee2208 TDF device. QuikSCAT engineering supports will be scheduled June 6-8, 2000 in order to demonstrate Apogee2208 automation.

ATS 3.2 beta was tested at WGS from May 26 – 31 using QuikSCAT engineering supports. The tests were arranged to determine any lost capability from ATS 3.1. The tests were scheduled through WGS scheduling engineer Debbie Dukes, monitored by operations personnel and demonstrated automation of all equipment required for a TR-1 code. The SAFS and Apogee2208, however, were not participants in the tests. The following engineering supports were scheduled and displayed no automation-related problems:

<u>Day</u>	<u>AOS</u>	<u>Orbit Number</u>
147 – May 26	22:30:34	4878
148 – May 27	00:28:00	4879
148 – May 27	22:34:37	4892
149 – May 28	00:03:00	4893
149 – May 28	21:58:00	4906
149 – May 28	23:20:05	4907
150 – May 29	22:55:02	4921
151 – May 30	22:30:01	4935
152 – May 31	00:27:00	4936

KNOWN BUGS OR LIMITATIONS:

This release of ATS does not include software development or fixes for:

- (1) ATS device heartbeat status polling (RFS 99-048).
- (2) Automation of the Aydin BPSK Demodulator Model 3329 (MGS DR 99-014).
- (3) Automatic loading of profiles on demand for pre-pass tests.
- (4) MetrumBVLDS tape graphical user interface lock-ups (MGS DRs 98-126, 99-054, 99-093).

INSTALLATION PROCEDURE:

ATS 3.2 is composed of approximately 25 megabytes of applications, dynamic link libraries and other text files. Installation and delivery will be coordinated between ViaSat software engineers, WFF scheduling and ground station operations.

A 2-hour Master/Node downtime period is required for file delivery. File delivery will be the responsibility of the ATS software development group from the remote installation at WGS. Two folders will be copied from WGS to each Master PC and remain until activated at installation time:

- (1) Master-ATS32-Files
- (2) WFF-ATS32-Files

Two folders will also be copied from WGS to each Node PC:

- (1) Node-ATS32-Files
- (2) Wff-ATS32-Files

A 2-hour Master/Node downtime period is also required for installation. The following procedure documents the installation procedure. This procedure should be conducted by operations personnel with telephone support and assistance from WGS ATS software developers.

- (1) Shutdown ATS processes on all Master/Node PCs, logoff and login as user Developer.
- (2) Use *Windows Explorer* to backup the existing copy of ATS 3.1. On each Master PC, copy the folder *Master* to *Master31* and *Wff* to *Wff31*. On each Node PC, copy the folder *Node* to *Node31* and *Wff* to *Wff31*.
- (3) Master PCs only:
 - a. Select all files under the *Master-ATS32-Files* folder and copy to the *Master* folder.
 - b. Select all files under the *Wff-ATS32-Files* folder and copy to the *Wff* folder.
 - c. Edit the system *hosts* file to add data stripper controller (WGS and University of Alaska sites, only) and Apogee2208 TDF IP addresses. Edit the system *services* file to add data stripper controller (WGS and University of Alaska sites, only) information.
- (4) Node PCs only:
 - a. Select all files under the *Node-ATS32-Files* folder and copy to the *Node* folder.
 - b. Select all files under the *Wff-ATS32-Files* folder and copy to the *Wff* folder.
 - c. Edit the General Resource Manager (GRM) registry files at *Node\Reg\GrmXX.reg* to add entries for the Apogee2208 TDF; communication port settings are required.
- (5) Logoff, shutdown and restart all Master/Node PCs.

HARDWARE REQUIREMENTS:

Apogee2208 TDF

- Software version 2.5.
- Network connection with IP address.

Master/Node PCs (no changes)

- Minimum Pentium-200 MHz for Master and Nodes.
- Minimum 128megabytes RAM
- 2 Gigabyte system drive
- Windows NT 4.0 (service pack 4)
- Devices connected to Node PCs via RS-232 port (and, in some cases an IEEE converter) on a Digibox. A Hewlett-Packard workstation (HP-UX 10.2) functions as an 11meter antenna control console.

COMMENTS:

Points of contact for ATS release 3.1 are [David L. Davis](#)/NASA (757-824-1444), Edward.K.Payne/GHG (757-824-1104) and [Jeffrey L. Dorman](#)/CSC (757-824-2300).

APPROVAL:

The software modifications described in this release notice has been validated and accepted.

NASA EPGN Project Manager

Date

NASA AWOTS/WGS Project Manager

Date

SOFTWARE RELEASED:

The software modifications described in this release notice has been completed and released to ground station operations.

System Manager

Date

NASA Program Monitor

Date

